UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,122	09/09/2003	Hank Wang	MR2707-45	9234

7590 11/17/2005

Morton J. Rosenberg
Rosenberg, Klein & Lee
3458 Ellicott Center Drive, Suite 101
Ellicott City, MD 21043

EXAMINER	
LEE, SEUNG H	
ART UNIT	**PAPER NUMBER**
2876	

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/657,122	WANG, HANK	
	Examiner	Art Unit	
	Seung H. Lee	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Receipt is acknowledged of the response filed on 06 September 2005, which has been entered in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oldendorf et al. (US 6,166,324, of record)(hereinafter referred to as 'Oldendorf') in view of Bianca et al. (US 6,051,781, of record)(hereinafter referred to as 'Bianca') and Kimura et al. (US 6,633,492)(hereinafter referred to as 'Kimura').

Re claims 1, 2, 10: Oldendorf teaches that a method for manufacturing a PC card comprises a top and bottom covers (30 and 40) wherein the covers are stamped from the metallic sheet for having the desired specification and having protrusions (55) extending therefrom, a insulative frames (52 and 62) are plastic material in which is insert molded onto the covers using injection molded mechanic, the top and bottom covers are bonded by sonically welding to form a card such as the PC card (see figs. 1-5; col. 1, lines 37-51; col. 2, lines 54-62; col. 3, line 64- col. 6, line 54).

However, Oldendorf fails to particularly teach or fairy suggests that the method comprises transferring of the metal belt and not releasing the covers after stamping process.

Bianca teaches a method and system for creating frames using the sheet of metal wherein the sheet of metal is conveyed through a serious of stamping machine (see figs. 8 and 9; col. 4, lines 44-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Bianca to the teachings of Oldendorf in order to provide an improved manufacturing system for conveying the metal sheet having frame until all the necessary stamping is applied prior to releasing the frame from the metal sheet for combining to form a case of the PC card. Although, Oldendorf as modified by Bianca fail to particularly teach or fairly suggest that the method for printing pattern on the first and the second metal sheet after forming the first and second plastic frames, it would have been an obvious manufacturing variation well within the ordinary skill in the art failing to provide any unexpected results for printing

pattern on the cover sheet after forming the plastic frames, that is, the printing pattern as shown in figures 1 and 2 of the Oldendorf can be applied after the forming the plastic frames, and therefore an obvious expedient.

Although, Oldendorf/Bianca teaches the method and system for creating frames using the sheet of metal wherein the sheet of metal is conveyed through a serious of stamping machine, they fails to particularly teach or fairly suggest that the plastic frames have the stakes embedded therein.

However, Kimura teaches a device package (10) comprising the frames (16 and 36) have fingers (26 and 46) embedded therein wherein the fingers are extended from the top and bottom covers (12 and 32) (see figs. 1-11; col. 4, line 17-col. 8,lines 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kimura to the teachings of Oldendorf/Bianca in order to provide a strong and secure package.

Re claims 3, 4, and 6: The top and bottom covers of the PC card also comprises protrusions (55) bended for forming the stakes as shown in figure 5, and the protrusions supports the insulative frames.

Re claims 5 and 7: The top and bottom covers of the PC card also comprise a bent grounding members (35 and 45) for supporting the insulative frames.

Re claim 8: The top and bottom cover and the insulative frames are bonded by sonically welding.

Re claim 9: The metallic sheet for producing the top and bottom covers using the stamping machine also is pre-coated with insulative material (see col. 2, lines 54-62; col. 4,lines 50-67)

Re claims 11, 13, and 15: the teachings of Oldendorf as modified by Bianca and Kimura have been discussed above. Although, Oldendorf as modified by Bianca and Kimura fail to particularly teach or fairly suggest that the card has a particular dimension such as a thickness of the metal shells are not larger than 0.15mm, a thickness of the first plastic frame is not larger than 0.7mm, and the second plastic frame is not larger than 1.4mm, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Oldendorf and modify the thickness of metal sheets and plastic frames in order to manufacture the various card according to their the specification such as a PC card, a Memory Stick, a MMC, a SD card, etc.

Re claims 12: The insulative frames (52 and 62) of Oldendorf forming a recess as shown in figure 5.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oldendorf as modified by Bianca and Kimura as applied to claim 11 above, and further in view of Farquhar et al. (US Re. 36,540, of record)(hereinafter referred to as 'Farquhar').

The teachings of Oldendorf/Bianca/Kimura have been discussed above.

Although, Oldendorf/Bianca/Kimura teach to bond the plastic frames using sonic welling, they fail to particularly teach or fairly suggest that the plastic frame is bonded by a glue.

However, Farquhar teaches that the adhesives are used for bonding the plastic frames to form a package such as a card (see figs. 1 and 3; col. 3, line 32- col. 4, line 34; claims 1 and 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Farquhar to the teachings of Oldendorf/Bianca/Kimura in order to provide an alternative method for combining the plastic frames using the adhesives such as a glue, in fact, using the glue for combining/bonding the plastic frames are well known in the art.

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oldendorf as modified by Bianca and Kimura as applied to claim 11 above, and further in view of Grevstad et al. (US 4,337,571)(hereinafter referred to as 'Grevstad').

The teachings of Oldendorf/Bianca/Kimura have been discussed above.

Although, Oldendorf/Bianca/Kimura teach to insulative films for forming a recess, they fail to particularly teach or fairly suggest that the insulative film comprises a polytetrafluoroethylene material.

However, Grevstad teaches a electrical insulator may be constructed using of polytetrafluoroethylene (PTFE) (see fig. 4; col. 4,lines 35- col. 5, line 11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Grevstad to the teachings of Oldendorf/Bianca/Kimura in order to provide sufficient temperature and chemical compatibility.

6. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oldendorf as modified by Bianca and Kimura as applied to claims 1 and 11 above, and further in view of Wallace (US 6,634,561).

The teachings of Oldendorf/Bianca/Kimura have been discussed above.

In addition to the teachings of Kimura as discussed above, he also teaches that the package (10) can have an opening or notch to accommodate a connector for an I/O device (see col. 8, lines 61-64).

However, Oldendorf/Bianca/Kimura fail to particularly teach or fairly suggest that the metal shell is stamped to include an elongate bent extension.

Wallace teaches the memory card structure having the elongate bent extension as shown in figure 1 for function as a connector (see figs. 1-2; col. 1, line 66- col. 2,line 44).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the structure of contacts as shown by Wallace to the teachings of Oldendorf/Bianca/Kimura in order to communicate with other devices via contacts therewith.

Response to Arguments

7. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

In response to the applicant argument that "Nowhere does Oldendorf et al. disclose or even suggest that such lateral protrusions are in any way actually "embedded" in any first or second plastic frame" (see page 11, line 12+), the Examiner respectfully provide Kimura reference wherein Kimura teaches the fingers serving as stakes are embedded into the plastic frames as discussed in paragraph 3 above.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seung H. Lee whose telephone number is (571) 272-2401. The examiner can normally be reached on Monday-Friday, 7:30 AM- 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Seung H Lee
Art Unit 2876
November 11, 2005

MICHAEL G. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800